UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
2672	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/934,479	FUJIWARA ET AL.
	Examiner	Art Unit
	Jeffery A Brier	2672

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>19 January 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-36</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-36</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
            application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 20050304

Detailed Action

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

1/19/2005 has been entered.

Response to Amendment

2.   The amendment filed on 1/19/2005 has been entered.

Response to Arguments

3.   Applicant's arguments filed 1/19/2005 have been fully considered but they are

not persuasive.

On pages 12-13 applicant argues that Fukui does not teach wherein all the

extracted document blocks together contain fewer characters or figures than does the

entire image. Due to the breadth of the claims "the entire image including at least one

character or figure" Fukui still teaches the claimed invention because when there is only

one character or element-6 or element-7 then Fukui teaches the claims. Similarly due

to the claim breadth when element-6, element-7 and the blank space on the third page

are considered figures then Fukui still teaches the claims.   Since the specification did

not use the term figure but instead used the phrase "photographic image area 20" then

Fukui teaches "wherein all the extracted document blocks together contain fewer

characters or figures than does the entire image" because the blank space on the third

page is not reproduced on the two pages as seen in figure 17.

On page 14 applicant discusses new claim 33. The statement is not fully correct

because Fukui teaches extracting at least one document block from an entire image,

the at least one document block being identified by a perimeter and containing a

specific image to be processed because headlines, text body, and other elements have

perimeters that identify those areas from other areas as separate areas. The user of

the system, which includes the system designer, creates or loads the relationship

extraction rule dictionary and the editing rule dictionary 72 which is a way of establishing

a perimeter.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 1-32, 35, and 36 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the written description requirement. The claim(s) contains subject

matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application

was filed, had possession of the claimed invention.

Claims 1, 9, 17, 27, and 32 were amended to claim the entire image including at least one character or figure and to claim wherein all the extracted document blocks together contain fewer characters or figures than does the entire image. A word search of the specification does not reveal the word figure or figures. The specification does make reference to "photographic image area 20" but it does not make a specific reference to a figure. Therefore the originally filed specification does not convey to one of ordinary skill in the art that applicant had possession at the time of filing extracting figures or extracting characters and figures.

When claims 1, 9, 17, 27, and 32 are read to have only one character then applicant has not provided a means which will produce an extracted document block containing fewer than one character.

When claims 1, 9, 17, 27, and 32 are read to have only one figure then applicant has not provided a means which will produce an extracted document block containing fewer than one figure.

Claims 35 and 36 are not supported by the original specification, see page 10 lines 4-18 which states:

> On the other hand, in step S104, the coordinate value of each apex positioned in the angles or corners of the document block 14 circumscribed by the mark 12 detected by the mark detecting section 171 is transmitted to the scanner engine 180. That is, in the present embodiment, an area specified by the user is extracted as a document block 14 to be processed. However, the method for extracting the document block 14 is not limited to this method. For example, an area containing at least a headline and body text corresponding to this headline may be automatically extracted as a document block 14 based on an image detected by well-known methods for detecting a character image equivalent to a headline, a character image equivalent to the body text, image equivalent to ruled lines and the like.

The claimed coordinates (claim 35) and user using an interface with the image

processing device (claim 36) is not taught by the specification.

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

7.   Claims 34-36 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 34:

This claim does not clearly define when the user establishes the perimeter. The

claim covers establishing the perimeter during the drawing process and after the original

document has been draw.

Claim 35:

This claim does not clearly define how the perimeter is established using

coordinates on the entire image. Is the claim claiming the user inputs specific

coordinates into the image processing device or is the user using the coordinates to

locate the perimeter on the entire image so the user can mark the perimeter on the

entire image.

Claim 36:

This claim does not clearly define how the perimeter is established using

coordinates on the entire image. Is the claim claiming the user inputs specific

coordinates into the image processing device or is the claim claiming the scanner which

senses the mark the user placed at the perimeter on the entire image.

Claim Rejections - 35 USC § 101

8.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

9.   Claims 1-36 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claims 9-16, 21-23, and 29:

These claims are directed to a program which is not one of the four categories of

invention permitted by 35 USC 101. These claims need to be amended to claim in the

preamble "A computer readable medium for storing a program for causing a computer

to execute image processing comprising the steps of:" Note the below supporting

excerpts from MPEP 2106 under the heading of: 1. Nonstatutory Subject Matter.

Claims 1-36:

This application is directed to a useful, concrete, and tangible result, however,

these claims are not. These claims are directed to manipulating abstract ideas and

mental steps. Independent claim 9 is a program claim that can cause but is not claimed

to cause a computer to execute image processing steps. Independent claim 17 is a

method claim that is not limited to a computer implemented process, thus, it covers

mental steps which is clearly unstatutory. Independent claim 1 is a means plus function

claim, thus, it claims that which is disclosed in the specification for performing the

functions but it also claims equivalent means, such as a person performing mental steps

which is clearly unstatutory. Independent claims 27, 32, and 33 are directed to a circuit,

however, a circuit is a broad item and is met by a person performing mental steps which

is clearly unstatutory. The CAFC clearly wrote in State Street at paragraph 4 *The*

question of whether a claim encompasses statutory subject matter should not focus on

which of the four categories of subject matter a claim is directed to -- process, machine,

manufacture, or composition of matter--but rather on the essential characteristics of the

subject matter, in particular, its practical utility. These claims are not limited to a

practical application such as displaying the processed image on a display device,

storing the processed in a computer readable memory for later presentation of the

image to a user, printing the processed image on a medium by the use of a computer

controlled printer, user a computer scanner to scan a document to be image processed,

etc. These are examples of a concrete useful and tangible results of a processed

image. Applicants' specification at page 4 lines 13-23 states:

> This image processing device also may be provided with file generation means
> for generating an electronic file storing the character code data laid out by the layout
> means.
> This image processing device also may be provided with a printer for printing the
> character code data laid out by the layout means on a recording substrate.
> This image processing device also may be provided with a reader for reading
> image data to be processed by optically reading an image of a document.

Applicants' specification at page 18 lines 6-13 states:

In step S216, the document data 34 (refer to FIG. 11) which has been completed by arranging the headline character code data 30, the body text character code data 32, and the photographic image area 20 within the rectangular vector data 26, are stored on hard disk 150 as an electronic file. The document data 34 also may be saved on a flexible disk or the like via the recording media drive 160.

Applicants' specification at page 20 lines 15 to page 21 line 2 states:

The image processing device also may have, in addition to the structure shown in FIG. 1, an interface for sending and receiving data between the image processing device and other information devices. In this way a generated document data 34 (refer to FIG. 11) may be transmitted to another information device such as a computer, printer or the like.
The image processing device also may have, in addition to the structure shown in FIG. 1, a printer engine for printing data on recording substrate such as cut paper, OHP transparencies, roll paper and the like. In this way a generated document data 34 may be printed on recording substrate.

Thus, applicants specification describes practical utility for the invention.

Dependent claims 6-8 and 14-16:

These dependent claims broadly claim "an electronic file storing the character code data", "a printer for printing the character code data", and "a reader for optically reading an image of a document" however, they are so broad they read on a human being recognizing the character code, storing the code in his memory, and printing with pen and paper. Therefore these claims need to be more further limiting to that which is not done by a human's mind and that which is not done by a human with pen and paper. State Street Bank & Trust Co. v. Signature Financial Group Inc. (CA FC) 47 USPQ2d 1596, 1603 (7/23/1998). AT&T Corp. v. Excel Communications Inc. (CA FC) 50 USPQ2d 1447. On page 1603 first paragraph the CAFC wrote in State Street:

Under Benson, this may have been a sufficient indicium of nonstatutory subject matter. However, after Diehr and

> Alappat , the mere fact that a claimed invention involves
> inputting numbers, calculating numbers, outputting
> numbers, and storing numbers, in and of itself, would not
> render it nonstatutory subject matter, unless, of course, its
> operation does not produce a "useful, concrete and tangible
> result." Alappat , 33 F.3d at 1544, 31 USPQ2d at 1557. 7

On page 1603 paragraph labeled [4] the CAFC wrote:

> [4] The question of whether a claim encompasses statutory
> subject matter should not focus on   which of the four
> categories of subject matter a claim is directed to -- process,
> machine, manufacture, or composition of matter--but rather
> on the essential characteristics of the subject matter, in
> particular, its practical utility. Section 101 specifies that
> statutory subject matter must also satisfy the other
> "conditions and requirements" of Title 35, including novelty,
> nonobviousness, and adequacy of disclosure and notice.
> See   In re Warmerdam , 33 F.3d 1354, 1359, 31
> USPQ2d 1754, 1757-58 (Fed. Cir. 1994).

Supporting excerpts from MPEP 2106 follows.

A process that consists solely of the manipulation of an abstract idea is <u>not</u>
concrete or tangible. See *In re Warmerdam*, 33 F.3d 1354, 1360, 31 USPQ2d 1754,
1759 (Fed. Cir. 1994). See also *Schrader*, 22 F.3d at 295, 30 USPQ2d at 1459. Office
personnel have the burden to establish a *prima facie* case that the claimed invention as
a whole is directed to solely an abstract idea or to manipulation of abstract ideas or
does not produce a useful result. Only when the claim is devoid of any limitation to a
practical application in the technological arts should it be rejected under 35 U.S.C. <u>101</u>.
Compare *Musgrave*, 431 F.2d at 893, 167 USPQ at 289; *In re Foster*, 438 F.2d 1011,
1013, 169 USPQ 99, 101 (CCPA 1971). Further, when such a rejection is made, Office
personnel must expressly state how the language of the claims has been interpreted to
support the rejection.

Federal courts have held that <u>35 U.S.C. 101</u> does have certain limits. First, the
phrase "anything under the sun that is made by man" is limited by the text of <u>35 U.S.C.</u>
<u>101</u>, meaning that one may only patent something that is a machine, manufacture,
composition of matter or a process. See, e.g., *Alappat*, 33 F.3d at 1542, 31 USPQ2d at

1556; *Warmerdam*, 33 F.3d at 1358, 31 USPQ2d at 1757 (Fed. Cir. 1994). Second, 35 U.S.C. 101 requires that the subject matter sought to be patented be a "useful" invention. Accordingly, a complete definition of the scope of 35 U.S.C. 101, reflecting Congressional intent, is that any new and useful process, machine, manufacture or composition of matter under the sun that is made by man is the proper subject matter of a patent.

The subject matter courts have found to be outside the four statutory categories of invention is limited to abstract ideas, laws of nature and natural phenomena.

1. Nonstatutory Subject Matter

Claims to computer-related inventions that are clearly nonstatutory fall into the same general categories as nonstatutory claims in other arts, namely natural phenomena such as magnetism, and abstract ideas or laws of nature which constitute "descriptive material." Abstract ideas, *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759, or the mere manipulation of abstract ideas, *Schrader*, 22 F.3d at 292-93, 30 USPQ2d at 1457-58, are not patentable. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*. *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). When nonfunctional descriptive material is recorded on some computer-readable medium, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make it statutory. Such a result would exalt form over substance.

In practical terms, claims define nonstatutory processes if they:
- consist solely of mathematical operations without some claimed practical application
(i.e., executing a "mathematical algorithm"); or
- simply manipulate abstract ideas, e.g., a bid (*Schrader*, 22 F.3d at 293-94, 30
USPQ2d at 1458-59) or a bubble hierarchy (*Warmerdam*, 33 F.3d at 1360, 31 USPQ2d
at 1759), without some claimed practical application.

A process that merely manipulates an abstract idea or performs a purely
mathematical algorithm is nonstatutory despite the fact that it might inherently have
some usefulness. In *Sarkar*, 588 F.2d at 1335, 200 USPQ at 139, the court explained
why this approach must be followed:
No mathematical equation can be used, as a practical matter, without establishing and
substituting values for the variables expressed therein. Substitution of values dictated
by the formula has thus been viewed as a form of mathematical step. If the steps of
gathering and substituting values were alone sufficient, every mathematical equation,
formula, or algorithm having any practical use would be per se subject to patenting as a
"process" under 101. Consideration of whether the substitution of specific values is
enough to convert the disembodied ideas present in the formula into an embodiment of
those ideas, or into an application of the formula, is foreclosed by the current state of
the law.
For such subject matter to be statutory, the claimed process must be limited to a
practical application of the abstract idea or mathematical algorithm in the technological
arts. See *Alappat*, 33 F.3d at 1543, 31 USPQ2d at 1556-57 (quoting *Diamond v. Diehr*,
450 U.S. at 192, 209 USPQ at 10). See also *Alappat* 33 F.3d at 1569, 31 USPQ2d at
1578-79 (Newman, J., concurring) ("unpatentability of the principle does not defeat
patentability of its practical applications") (citing *O'Reilly v. Morse*, 56 U.S. (15 How.) at
114-19). A claim is limited to a practical application when the method, as claimed,
produces a concrete, tangible and useful result; i.e., the method recites a step or act of
producing something that is concrete, tangible and useful. See *AT&T*, 172 F.3d at 1358,
50 USPQ2d at 1452. Likewise, a machine claim is statutory when the machine, as
claimed, produces a concrete, tangible and useful result (as in *State Street*, 149 F.3d at
1373, 47 USPQ2d at 1601) and/or when a specific machine is being claimed (as in
Alappat, 33 F.3d at 1544, 31 USPQ2d at 1557 (in banc). For example, a computer
process that simply calculates a mathematical algorithm that models noise is
nonstatutory. However, a claimed process for digitally filtering noise employing the
mathematical algorithm is statutory.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.   Claims 1-33 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by

Fukui et al., U.S. Patent No. 5,179,650.

Both applicant's system and Fukui's system scans a newspaper or similar

document, analyzes the document's characters, drawings, and photos, alters the block

containing the characters which is a portion of the entire scanned image, and alters the

layout of the characters in the altered block. Fukui further teaches with regard to figure

17 processing the character, drawings and photo blocks and reconstructing the

character, drawings and photo blocks into an area of two pages which is less than the

entire image of three pages. Applicant needs to further amend claims 1, 9, 17, and 27

to distinguish the claims from Fukui.

Due to the breadth of the claims "the entire image including at least one

character or figure" Fukui still teaches the claimed invention because when there is only

one character or element-6 or element-7 then Fukui teaches the claims. Similarly due

to the claim breadth when element-6, element-7 and the blank space on the third page

are considered figures then Fukui still teaches the claims.   Since the specification did

not use the term figure but instead used the phrase "photographic image area 20" then

Fukui teaches "wherein all the extracted document blocks together contain fewer

characters or figures than does the entire image" because the blank space on the third

page is not reproduced on the two pages as seen in figure 17.

A detailed analysis of the claims follows.

Claim 1:

Fukui teaches an image processing device (*see figure 1*) comprising:

extraction means (*scanner 10, column 3 lines 17-24 describes input unit 10 as a*

scanner) for extracting at least one document block (*Figure 17 shows several blocks of*

the image extracted to perform individual processing on each block.), wherein the

extracted at least one document block contains a specific image (*column 3 lines 17-24*

further describes article data which is character data, graphic data and image data) to

be processed (*the block containing the characters it to be processed*) from among, the

entire image (*Each block is from a portion of the image.   Each block containing the*

characters or graphics or image is a portion of the entire scanned image.) including at

least one character or figure (*See column 4 lines 31-40 and column 8 lines 21-25, of*

Fukui are directed to a document having sentence, numerals and letters, elements and

figure elements. Sentence elements inherently include the claimed characters since

letters are characters. Due to the breadth of the claims "the entire image including at

least one character or figure" Fukui still teaches the claimed invention because when

there is only one character or element-6 or element-7 then Fukui teaches the claims.

Similarly due to the claim breadth when element-6, element-7 and the blank space on

the third page are considered figures then Fukui still teaches the claims.   Since the

specification did not use the term figure but instead used the phrase "photographic

image area 20" then Fukui teaches "wherein all the extracted document blocks together

contain fewer characters or figures than does the entire image" because the blank

space on the third page is not reproduced on the two pages as seen in figure 17.)

wherein all the extracted document blocks together contain fewer characters or figures

than does the entire image (*Applicants' claimed figure is actually a photographic image*

which corresponds to the blank image shown on page 3 of the document in Fukuis'

figure 17.);

recognition means for recognizing character code from a character image within

the at least one document block (*step 103 extracts numeral codes and other character*

like codes, column 4 lines 43-44, in Fukui's system scanner 10 scans the image of the

document in order to be able to perform the analysis of the image data to determine key

word and number of letters, character codes would have to be known for the article

data, column 8 lines 11-28);

reconstruction means for reconstructing the at least one document block in a

specific shape *(figures 15A, 15B, and 15C illustrates reconstructing the article block to*

better fit the document page, figure 2b illustrates a flowchart depicting the processing

performed in the means of figure 1 for determining the layout article block) based on the

extracted at least one document block (*the block containing the characters is an*

extracted document block portion of the entire scanned image), wherein all the

reconstructed document blocks are together less than the entire image (*Figure 17*

shows and column 8 lines 29-45 describes how the scanned blocks on the three pages

are reorganized by the processing onto two pages. Thus, the blocks of the entire image are now reconstructed into less than the entire image of three pages. Note column 8 lines 29-34 describes the reconstructed document has an area less than the total area of the document before reconstruction because at least the subordinate elements were reduced in area. Also note applicants' claimed figure is actually a photographic image which corresponds to the blank image shown on page 3 of the document in Fukuis' figure 17 and which is not reproduced in the two pages of the processed document as shown in Fukuis' figure 17.); and

layout means for laying out character code data corresponding to the character code recognized by the recognition means within the at least one reconstructed document block (*the article data represented by numeral codes, character codes, is laid out to fit the reconstructed article block*).

Claim 2:

Fukui teaches an image processing device as claimed in claim 1, wherein the extraction means extracts a plurality of document blocks (*column 3 lines 27-43 describes the many blocks in the image, titles, headers, articles, sections*), and

the reconstruction means arranges the plurality of extracted document blocks into a single block (*see figures 15A, 15B, and 15C)* reconstructed to the specific shape (*one page of the document*).

Claim 3:

Fukui teaches an image processing device as claimed in. claim 1, wherein the

specific image includes a character image of a headline (*title*) and a character image of

body text (*article corresponding to the title*) corresponding to the headline.

Claim 4:

Fukui teaches an image processing device as claimed in claim 3, further

comprising headline character (*title*) arrangement means (*steps 115-118*) for arranging

character code data corresponding to the character image of the headline at a specific

position within the at least one reconstructed document block.

Claim 5:

Fukui teaches an image processing device as claimed in claim 1, wherein the

reconstruction means adjusts a vertical or horizontal dimension (*figures 15A, 15B, and*

15C show one long column becoming two columns of the same vertical and horizontal

dimensions) of the at least one document block to a length approximating a natural

integer multiple of a length (*vertical or horizontal*) of one column of multiple columns

formed within the at least one document block.

Claim 6:

Fukui teaches an image processing device as claimed in claim 1, further

comprising file generation means for generating an electronic file storing the character

code data laid out by the layout means (*display unit 90 displays the output of step 119,*

since figure 2b performs many processes on many characters, see step 113, before

step 119 occurs an electronic file for storing the character codes is needed to

accumulate the results of the steps 111-118).

Claim 7:

Fukui teaches an image processing device as claimed in claim 1, further

comprising a printer (*column 4 line 13*) for printing the character code data laid out by

the layout means (*column 7 lines 64-68*) on recording substrate (*inherently the printer*

prints on paper which is a recording substrate since the paper maintains the image of

the characters).

Claim 8:

Fukui teaches an image processing device as claimed in claim 1, further

comprising a reader (column 3 line 23 describes data input unit 10 as a scanner which

inherently is a reader of images on a substrate) for optically reading (since the

documents scanned are readable by humans then the scanner is optical) an image

(*illustrated in figures 3A, 3B and 3C*) of a document to obtain the image data to be

processed.

Claim 9:

Claim 9 is a program for causing a computer to execute image processing claim

which corresponds to image processing device claim 1 and claims the same functions

that claim 1 claims, thus, claim 9 is rejected for the reasons given for claim 1. This

application is directed to computers, see column 1 lines 17-25, additionally Fukui's

figure 1 illustrates a computer since it computes and the flowcharts illustrated in Fukui's

figures 2a and 2b represent a program that controls the computer of figure 1.

Claims 10-16:

Claims 10-16 correspond respectively to claims 2-8, thus, claims 10-16 are

rejected for the reasons given for claims 2-8.

Claim 17:

Claim 17 is an image processing method claim corresponding to the functions

performed by computer program claim 9 and image processing device claim 1, thus,

claim 17 is rejected for the reasons given for claims 1 and 9.

Claims 18, 21 and 24:

Fukui at column 3 lines 17-24 and 27-43 describes the input data as article data,

graphic data and image data which are classified according to distinct physical,

structural, and denotative characteristics of different parts of a document to be edited.

Column 5 lines 4-9 and column 8 lines 29-45 described detecting various areas of the

scanned document and processing each area separately to fit resized blocks. Each of

the different areas of the document corresponding to different articles, graphics, and

images are visually different from each other. For example an image such as element 6

and another image such as element 7 illustrated in figure 17 are visually different, thus,

they are a marked portion of the entire image. Therefore, Fukui teaches the claimed

wherein the extracted document block is a marked portion of the entire image. This

claim broadly claims a marked portion, thus, the visual differences between a portion of

the image having text and a portion of the image having a figure meets the limitation of

marked. The claim does not claim the specific mark described at page 9 lines 12-23.

Claims 19, 22 and 25:

Column 4 lines 31 to column 5 line 3 discusses steps 102-104 which analyzes

the title and the document, thus, Fukui teaches analyzing the title and body of text as a

character block while the graphics and image blocks are analyzed in different portions

with regard to the discussion of figure 17 at column 8 lines 29-45. Therefore, Fukui

teaches the claimed wherein the extracted document block also includes a photographic

image area that is extracted and laid out with the character code data.

Claims 20, 23 and 26:

Column 5 lines 4-11 describes a document formed by articles which is character

data and graphics which is at least photographic image data as being processed to form

a document with graphic data and character data. Therefore, Fukui teaches the claimed

wherein the extracted document block also includes a photographic image area that is

extracted and laid out with the character code data.

Claim 27:

This claim is an device claim version of claim 1 which claims the same functions

that claim 1 claims. This claim is rejected for the reasons given for claim 1. Additionally

Fukui teaches the circuit limitations of the claim because Fukui is a apparatus that is

formed of circuits performing the image processing functions.

Claim 28:

Fukui teaches an image processing device as claimed in claim 1, wherein an

area of the reconstructed at least one document block is the same as a total area of the

extracted at least one document block (*Fukui teaches to one of ordinary skill in the art*

the following: enlarging the area of the extracted document to fit an enlarged document

area, reducing the area to the extracted document to fit a reduced document area, and

maintaining the area of the extracted documents when its area is the same as the

desired document area. Column 3line 65 to column 4 line 5 teaches this because a

"prescribed layout pattern" includes a layout area that is larger than the document's

layout area, includes a layout area that is smaller that the document's layout area, and

includes a layout area that is the same size a the document's layout area.).

Claims 29-31:

These claims claim the same function that claim 28 claims and these claims are

rejected for the same reasons given for claim 28.

Claim 32:

This claim is an device claim version of claim 1 which claims the same functions

that claim 1 claims. This claim is rejected for the reasons given for claim 1. Additionally

Fukui teaches the at least one circuit for limitation of the claim because Fukui is a

apparatus that is formed of at least one circuit for performing the image processing

functions.

Claim 33:

Fukui teaches extracting at least one document block from an entire image, the

at least one document block being identified by a perimeter and containing a specific

image to be processed because headlines, text body, and other elements have

perimeters that identify those areas from other areas as separate areas. The user of

the system, which includes the system designer, creates or loads the relationship

extraction rule dictionary and the editing rule dictionary 72 which is a way of establishing

a perimeter.

Fukui teaches an image processing device (*see figure 1*) comprising:

at least one circuit for (*Fukui is a apparatus that is formed of at least one circuit

for performing image processing functions.*);

extracting at least one document block from an entire image (*Figure 17 shows several blocks of the image extracted to perform individual processing on each block. Column 3 lines 17-24 further describes article data which is character data, graphic data and image data. Each block containing the characters or graphics or image is a portion of the entire scanned image.*), the at least one document block being identified by a perimeter (*Headlines, text body, and other elements have perimeters that identify those areas from other areas as separate areas.*) and containing a specific image (*Headlines, text body, and other elements.*) to be processed, the perimeter being established by the user beforehand (*The claim does define the perimeter, therefore, when the user of the system, which includes the system designer, creates or loads the relationship extraction rule dictionary and the editing rule dictionary 72 the user has established the perimeter beforehand.*);

recognizing character code within the at least one document block (*Step 103 extracts numeral codes and other character like codes, column 4 lines 43-44, in Fukui's system scanner 10 scans the image of the document in order to be able to perform the analysis of the image data to determine key word and number of letters, character codes would have to be known for the article data, column 8 lines 11-28.*);

reconstructing the at least one document block in a specific shape based on the at least one extracted document block (*The reconstructed shape of each block is based upon the extracted shape.*); and

laying out character code data corresponding to the recognized character code

within the reconstructed at least one document block (*The article data represented by*

numeral codes, character codes, is laid out to fit the reconstructed article block).

Claim 36:

Fukui teaches the image processing device of claim 33, wherein the perimeter is

established by the user using an interface with the image processing device (*When the*

user of the system, which includes the system designer, creates or loads the

relationship extraction rule dictionary and the editing rule dictionary 72 the user has

established the perimeter beforehand by the use of a user interface with the image

processing device.).

10.   A prior art rejection cannot be made for claims 34 and 35 because the metes and

bounds of the claims are not definite and because the specification does not support at

least claim 35. Thus, an indication of allowability would be premature. In re Steele, 305

F.2d 859,134 USPQ 292 (CCPA 1962) (it is improper to rely on speculative

assumptions regarding the meaning of a claim and then base a rejection under 35

U.S.C. 103 on these assumptions).

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jeffery A Brier whose telephone number is 703-305-

4723 until the move and after the move the telephone number will be 571-272-7656.

The examiner can normally be reached on M-F from 6:30 to 3:00. If attempts to reach

the examiner by telephone are unsuccessful, the examiner's supervisor, Michael

Razavi, can be reached at (703) 305-4713). The fax phone number for the organization

where this application or proceeding is assigned is 703-872-9306.

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Business Center (EBC) at 866-217-9197 (toll-free).

Jeffery A Brier
Primary Examiner
Art Unit 2672